

**282—17.1 (272) Requirements for secondary level (grades 7-12) license.** The initial license with the appropriate endorsement will be issued if the requirements of rules 282—13.6(272) and 282—13.18(272) for initial licensing have been met.

**17.1(1) *Secondary level career and technical endorsements.*** The following are required for adding secondary level career and technical endorsements to an initial, standard, master educator, or permanent professional teaching license.

*a. Agricultural sciences and agribusiness.*

(1) Completion of 24 semester credit hours in agriculture and agriculture education to include:

1. Foundations of vocational and career education.
2. Planning and implementing courses and curriculum.
3. Methods and techniques of instruction to include evaluation of programs and students.
4. Coordination of cooperative education programs.
5. Coursework in each of the following areas and at least 3 semester credit hours in five of the following areas:

- Agribusiness systems;
- Power, structural, and technical systems;
- Plant systems;
- Animal systems;
- Natural resources systems;
- Environmental service systems; and
- Food products and processing systems.

(2) One thousand hours of work experience in one or more of the areas listed in 17.1(1) “e.”

*b. Marketing/distributive education.* Completion of 24 semester hours in business to include a minimum of 6 semester hours each in marketing, management, and economics. Three thousand hours of recent, relevant work experience in occupations where the distribution of goods and services was the prime function. Coursework in foundations of career and technical education, in curriculum design oriented to marketing, and in the coordination of cooperative education programs.

*c. Office education.* Completion of 24 semester hours in business to include coursework in office management, business communications, word and data processing, and computer applications in business. Three thousand hours of recent, relevant work experience in an office-related occupation. Coursework in foundations of career and technical education, in curriculum design oriented to office education, and in the coordination of cooperative education programs.

*d. Consumer and homemaking education.* Completion of 24 semester hours in food and nutrition, consumer education, family living and parenthood education, child development, housing, home and resource management, and clothing and textiles. Four hundred hours of work experience in one or more homemaking or consumer-related occupations. Coursework in consumer and homemaking education to include methods and techniques of instruction, foundations of career and technical education, course and curriculum development, and evaluation of programs and students.

*e. Career and technical home economics.*

(1) Option 1. Completion of the requirements for consumer and homemaking education (see 17.1(1) “d”) and special preparation in the career and technical area or 400 hours of employment related specifically to the career and technical area.

(2) Option 2. Completion of a baccalaureate degree with a major in the career and technical area, coursework in methods and techniques of teaching, course and curriculum development, evaluation of programs and students, foundations of career and technical education, coordination of cooperative programs and a teaching practicum (supervised or assessment of other teaching experience), and 400 hours of employment related specifically to the career and technical area.

**17.1(2) *Multioccupations.*** Completion of any 7-12 endorsement, and in addition thereto, coursework in foundations of career and technical education, coordination of cooperative programs, and competency-based curriculum development. Four thousand hours of career and technical experience in two or more occupations. The multioccupations endorsement also authorizes the holder to supervise students in cooperative programs, school-to-work programs, and similar programs in which the student is placed in school-sponsored, on-the-job situations.

**17.1(3) *Specialized secondary career and technical endorsement programs.*** These are bachelor's degree programs which include specific preparation in career and technical teacher education.

*a. Health occupations.* Four thousand hours of health care-related career and technical experience within five years preceding application for licensure in the occupation to be taught. Program completion leading to registration, certification, or licensure in Iowa in the health specialty to be taught. Coursework in foundations of career and technical education, planning and implementing courses and curriculum, methods and techniques of instruction, and evaluation of programs and students.

*b. Trade and industrial subjects.* Demonstrated career and technical competence in an industrial, trade, or technical field by completion of a minimum of 4,000 hours of practical, hands-on experience in the area in which the endorsement is sought or written examination. Coursework in foundations of career and technical education, planning and implementing courses and curriculum, methods and techniques of instruction, and evaluation of programs and students.

*c. Engineering.*

(1) Completion of a baccalaureate degree in engineering.

(2) Demonstrated career and technical competence in engineering by completion of a minimum of 4,000 hours of practical, hands-on experience in engineering.

(3) Coursework in foundations of career and technical education, planning and implementing courses and curriculum, methods and strategies of STEM instruction, and assessment of STEM programs and students.